



Reliable Reagents for Scalable Peptide Manufacturing

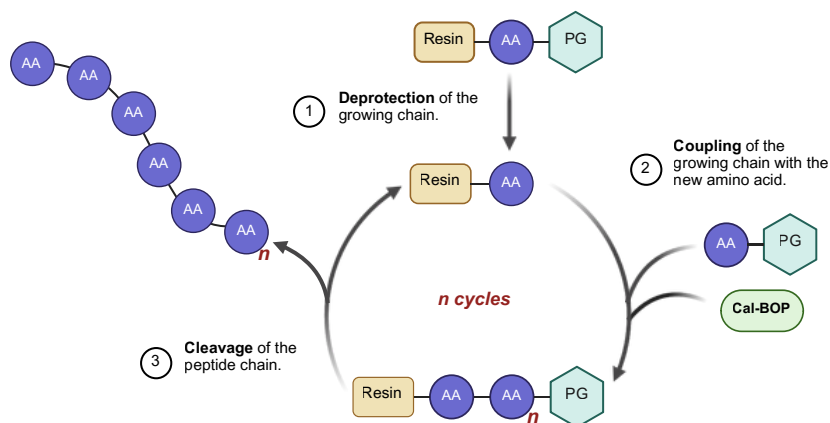
Trusted phosphonium-based coupling agents built for performance, safety and compliance

Peptide therapeutics represent a \$117B global market, projected to reach \$260B by 2030 - with over 100 FDA-approved drugs and a double-digit annual growth rate. As demand accelerates, manufacturers need high-performance reagents backed by proven chemistry and secure supply.

Phosphonium-based coupling reagents such as BOP have become industry standards for their strong performance in yield, reaction speed, and minimized racemization - even with challenging amino acids. Originally advanced by Kenner and later refined by Castro and Coste, these reagents remain essential for efficient solid-phase peptide synthesis (SPPS) from early development through GMP scale-up.

Ascensus ensures global supply continuity, robust regulatory support, and proven manufacturing experience with phosphonium reagents that meet the quality and documentation expectations of today's clinical and commercial programs.

Figure 1. Solid Phase Peptide Synthesis Cycle



Product Information	Material	Grade
Cal-BOP Item # 15-0618 CAS # 128625-52-5	Benzotriazol-1-yloxytriisopropylphosphonium hexafluorophosphate	Research GMP

Ascensus Specialties cGMP REAGENTS FOR SPPS

Using cGMP-grade peptide coupling reagents in solid-phase peptide synthesis (SPPS) ensures maximum control over peptide bond formation, minimizing impurity formation and enhancing yield. Coupling reagents such as benzotriazol-1-yloxytriisopropylphosphonium hexafluorophosphate (Cal-BOP*) are known for selectivity and efficiency.

For manufacturers operating in regulated environments, cGMP Cal-BOP* reagents provide traceability, lot-to-lot consistency, and compliance-ready documentation essential for clinical and commercial peptide production.

Table 1. Properties of Popular Peptide Coupling Reagents

	Cal-BOP	HBTU
DMF solubility	Good	✓ Excellent
Coupling efficiency	High	High
Racemization risk	Low	Low
Shelf stability	✓ Stable (dry)	✓ Stable (dry)
Relative cost	✓ Moderate	✓ Moderate

To request a sample or quote or to learn more, contact us at ask@ascensusspecialties.com



Headquartered in Evans City, PA, Ascensus Specialties is a global leader in catalysts, ligands, building blocks, and specialty reagents. Our 60+ years of synthetic know-how allows us to bring additional value to our clients through our custom synthesis and GMP services. From world-class manufacturing facilities in Elma, WA, Evans City, PA, Newburyport, MA, and Cambridge, UK, Ascensus has a global reach that ensures our clients can consistently manufacture their products to the highest standards.



THE ASCENSUS ADVANTAGE

60+ Years of Experience

Custom-Tailored Purity and Impurity Profiles

Commercial GMP Capabilities

Dependable Global Supply Chain

Process Control and Robustness

Customer Focused Service



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